Wireline Directory Services Market

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Wireline Directory Services Market

Executive Summary

Market Overview

Introduction

The U.S. retail wireline directory assistance (DA) services market generated $3.38 billion in revenues in 2000. While this is an increase from the previous year, wireline revenues for DA are not expected to increase throughout the forecast period (2000-2007). Wireline DA providers are faced with strong and increasing competition from wireless and Internet providers of DA. Wireless services and calling plan fees are rapidly declining. More subscribers are beginning to use wireless phones as their primary telecommunication method and abandoning consumer wireline service. Additionally, most often call completion service is either free or offered at much lower rates than wireline service. Internet sites that offer directory assistance are also becoming more of a threat to wireline directory assistance providers, especially to their commercial revenues. As more homes and businesses purchase high-speed data access, wireline providers will lose the time savings and convenience advantage they have over the Internet. Another directory assistance service that is stealing revenues from wireline providers is the standard telephone book. The "Phone Book" is now being produced to cater to niche groups, in addition to the general public. There are print directories that exclusively list ethnic businesses, women's only businesses, and other specific categories. Additionally print directories are typically free to consumers.

For the next few years, wireline providers will continue to experience an increase to their demand for minutes and revenues. This can be attributed to the following factors:

- Convenience of wireline service
- The development and marketing of new products by the service providers is helping expand DA usage among commercial and consumer customers
- Overwhelming number of households and businesses whose primary telecommunication method is wireline service
- Users' uncertainty of whether or not the call is free
- Listings are updated on a daily basis, as opposed to the annual updates of print directories

For the purpose of this deliverable, the U.S. wireline directory assistance market is divided into the following segments:

- Local Directory Assistance Services
- National/Long Distance Directory Assistance Services

Along with revenues received for providing listings, carriers also receive services for connecting the two parties. The historical data and forecasts include these call completion revenues, as carriers do not adhere to a uniform method of reporting these revenues, and often include them in their DA revenues. This is especially true for national/long distance directory assistance services (NDA).

The key challenges faced by the wireline directory assistance industry include:

- The abundant use of wireless communication is limiting the growth of wireline directory assistance revenues
- The increasing use of Internet directories, especially by commercial subscribers, to access listings is suppressing revenue growth for wireline providers
- Providers must meet the subscribers' demand for accuracy by constantly updating and correcting listings
- Rising operator costs are forcing providers to increase prices for service, which has detrimental affect on usage
- Implementing and sustaining a long term, successful customer service initiative

Competitive Analysis

The competitive structure of the retail directory assistance market can be summarized by two types of providers: the incumbent local exchange carriers (ILECs) and the interexchange carriers (IXCs). For most of the market's existence, ILECs and IXCs did not compete with each other. ILECs, primarily the regional bell operating companies (RBOCs), controlled the local directory assistance market. IXCs such as AT&T and WorldCom controlled the national directory assistance market, primarily because of restrictions placed on RBOCs by the Telecommunications Act of 1996 (1996 Act). IXCs, not only earned revenues from their 1+NPA products and one source directory assistance products, but were able to grow their revenues by charging for call completion services on national searches.

The recent offerings of single number national directory assistance has blurred the distinction between the two types of providers. Both ILECs and IXCs have single number products and are beginning to penetrate each other's market. ILECs offer 411 NDA service that allows them to provide national listings to their customers. AT&T has a very successful product called AT&T 00 INFO that allows customers to get directory assistance, yellow page look-up, reverse look-up, and call completion. WorldCom is also supporting a single number product (10-10-9000). This number, however, is accessible by subscribers and non-customers alike. The added benefit of using AT&T's or WorldCom's product is that the user receives the call completion service at no additional charge, on every call.

Despite the efforts of providers to gain share in both the local and national markets, IXCs still control the majority of national directory assistance volume, and ILECs still maintain a comfortable share of the local market. This can be attributed to the public's general apathy to the new products. They either do not know about the merits of each product, or do not believe that they receive a noticeable benefit from using a one source product over a single number directory assistance product. A large portion of customers still use 411 only to obtain local listings and 1+NPA-555-1212 to find national listings. ILECs are attempting to reduce this trend by heavily marketing their single number products. On the IXC side, AT&T launched an extensive marketing and advertising campaign for AT&T 00 INFO to its subscribers. AT&T and WorldCom also offer single number products to non subscribers. AT&T promotes its 10-10-ATT-10 product that offers the same services to non subscribers.

TECHNOLOGIES

The labor intensive nature of the operator services industry has forced service providers to employ automation in the provision of directory service. Service providers are increasingly using front and/or back end automation to reduce the average work time for operators. The reduction in operator time helps operators handle more queries per hour, which in turn increases productivity. The increase in productivity means that callers' inquiries are answered more efficiently.

Voice portal services are relatively straightforward to deploy and offer many opportunities to carve out a singular niche in the market. Existing portal and Web site operators have huge databases and can support telephone applications with minimal investment.

Technology has evolved. ASR, in particular, has made dramatic advances, powered in large measure by huge increases in processing power. The adoption of a standard voice-scripting language, such as voice extensible markup language (VXML), can be expected to fuel voice portal services, just as hypertext markup language (HTML) fueled development for the Internet. At the same time, the cost of creating a speech-based portal platform continues to decline. Increasing densities and decreasing costs on the voice processing and network interface hardware that form a central part of a voice portal system allowing service providers to serve more users at less cost. Finally, the Internet has raised public expectations, with people growing used to having information at their fingertips when they want it. Once consumers get accustomed to immediate news, weather reports, movie listings, or stock quotes over the Internet, the transition to phones makes perfect sense.

Summary of Major Findings

Opportunities and Forecasts

Opportunities for increasing market revenues abound for every market participant. AT&T and WorldCom are taking advantage of ILECs' inability to one source single number national directory assistance products to their subscribers. Single number products such as "00" INFO, 10-10-9000, and 1+411 remove the barrier of users needing to know area codes to conduct searches. This should reduce the usage of service among most end users. 1+411 and one source directory assistance are products in which end users can be connected to an operator that will search a national database using only a name and city provided by the user. By contrast, many CLEC subscribers must know the area code they are trying to call, otherwise they must first dial 1+NPA-555-1212. The operator, after determining the area code, then instructs the user to disconnect and dial the 1+NPA-555-1212 to continue the search. This is both time consuming and inconvenient for users. Having a negative experience, like the one described, frustrates the user and makes single number directory assistance services more attractive. WorldCom offers its 10-10-9000 service to any wireline user, despite who they use for wireline service. AT&T also offers a service to non-AT&T subscribers called 10-10-ATT-00.

ILECs are competing on the same level with IXCs in the national directory assistance market. They offer a single point of contact for national searches and can typically provide directory assistance for less than IXCs advertise. The advantage that IXCs have over ILECs is their own ability to complete any national call. Most ILECs have not received 271 Relief in their regions and, as such, cannot offer to complete national calls. If they do not address this issue (lower current DA rates or work to gain the ability to complete national calls), ILECs are in danger of losing market share within their own territories. The opportunity here is two-fold: IXCs can penetrate these markets and offer lower NDA prices with call completion service included in the price to ILEC subscribers; or ILECs can fight off one source NDA providers by launching their one source single number NDA product. The latter opportunity will take several years to reach full fruition. Currently, only six regions have opened their long distance markets to RBOCs.

Call completion services among local directory assistance providers is another great opportunity to increase market revenues. Providing this service as part of the initial search offering will allow providers to increase their prices, and thus revenues. Providers must be careful not exceed too high of a price; end users can still use wireless and print directories to conduct their searches, and as such, may be more price conscious. To combat the possibility of increasing prices too much, providers can offer call completion for a nominal fee of five or ten cents, while only slightly increasing their fees for listing searches. Call completion service can be marketed as a time saver, as a convenient enhanced service, or if its cost is included within the initial price, as a "free" service available to increase customer satisfaction.

Finally, perhaps the least expensive opportunity available to wireline directory assistance providers to improve revenues is the creation and marketing of enhanced services. Until very recently, the only enhanced service to increase revenues had been call completion services. Call completion has graduated from an enhanced service to a complementary and viable directory assistance service. Providers now have the ability and opportunity to offer many of the enhanced services that wireless customers receive. Some of the enhanced services that may be offered over wireline service are:

- Stock Quotes
- Weather and Traffic Updates
- Reverse Searches*
- Map Directions
- Restaurant and Entertainment Locators
- Yellow Page Searches*

Those services with asterisks are available to some end users but are limited in some areas and to some types of providers. These are higher end value added services that do not cost much money to provision, but make the end user feel like they are receiving the best service available. Enhanced services like these can increase revenues disproportionately from the amount of capital invested in them.

Revenues for all services included in the wireline directory assistance services market were approximately $3.38 billion in 2000. This is an increase of over 4.32 percent from the previous year. This growth can be attributed to the increased need for directory assistance service caused by the creation of new area codes, the emergence of new businesses, and an increase in relocating families. In addition to new area codes, existing area codes have also been expanded to include newly developed communities or areas annexed into major cities. Keeping in touch with friends in different states would become harder to accomplish without directory assistance.

The market is expected to experience a reduction in its growth rate over the forecast period, but will still realize positive growth from its current level. Its seven year (2000-2007) Compound Annual Growth Rate (CAGR) is expected to be 1.26 percent. This is a full percentage point below the ten year period's CAGR. Increased usage of wireless service by consumers and single number NDA products are believed to be considerable restraints on market revenues. Wireless service will create a migration of users from wireline service. Wireless directory assistance is less expensive, often free, and many times includes call completion service at better rates than what wireline providers can offer. Single number directory assistance products can help increase the number of directory assistance calls being executed per month, and increase revenues, but the growth is limited due to the low cost nature of the product. NPA services charge as much as $1.99 per call and can charge $1.00

for completing the call. In contrast, AT&T's and WorldCom's NDA products charge $1.49 and $0.99 respectfully. They both include call completion service at no additional charge. While revenues may increase, the amount it increases may under represent the additional call volume.

The national directory market currently is responsible for a little less than 38 percent of the total market. Despite the attractiveness of free Internet directories, the majority searches completed by commercial enterprises will be via wireline directories. In fact, overall demand is expected to increase over the forecast period. Volume will be driven by national listing searches. In 2000, NDA volume accounted for 20 percent of the total call volume. By 2007, NDA volume is expected to account for over 32 percent of total volume. These numbers are illustrated better on Figures 1 and 2 in the following section.

Market Segment Analysis

The market for wireline directory assistance is separated into two not so distinct segments. Historically the national directory assistance market had been completely separate from the local services directory. Interexchange carriers controlled the national directory assistance market and ILECs, particularly RBOCs, were solely responsible for providing local directory assistance. Figure 1 illustrates the breakout of revenue share between ILECs and IXCs. NDA revenues are expected to increase in proportion to local directory assistance revenues. Local directory assistance will maintain its majority share of revenues, but will be reduced from holding a commanding 63 percent of the market in 2000, to a more distributed level of 53 percent by 2000. With the advent of 1+411 capability, ILECs can now offer national directory assistance. IXC's, to counter this, created one source single number directory assistance products that can be used by any wireline user for both national and local listings. This should increase NDA revenues, as shown in Figure 1, because ILEC subscribers now have an easier way to access national listings (1+411) and single number directory assistance products will increase overall demand for both local and national searches.

The result is a blurring of revenue shares in both market segments. RBOC's particularly those with interLATA capability are eating away at the IXCs' dominant market share, and IXCs, using single number products are beginning to become a factor in the local directory assistance market. As would be expected from the revenue shares described in Figure 1, the proportion of each type of provider's call volume is also changing. Figure 2 details how NDA call volume becomes a larger part of overall market revenues. In 2007, call volume for national searches will equate to approximately 32.4 percent of overall call volume. This is an increase of nearly 400 million minutes over its initial minutes in 2000.

FIGURE 1

Wireline Directory Assistance Market: Revenue Share--NDA vs. LDA (U.S.), 1997-2007

Year	NDA (%)	LDA (%)
1997	35.2	64.8
1998	35.8	64.2
1999	36.4	63.6
2000	37.4	62.6
2001	38.5	61.5
2002	39.5	60.5
2003	40.4	59.6
2004	41.7	58.3
2005	43.3	56.7
2006	44.7	55.3
2007	46.2	53.8

Note: All figures are rounded; the base year is 2000. Source: Frost & Sullivan

FIGURE 2

Wireline Directory Assistance Market: Volume Share--NDA vs. LDA (U.S.), 1997-2007

Year	NDA (%)	LDA (%)
1997	16.5	83.5
1998	17.5	82.5
1999	19.0	81.0
2000	20.6	79.4
2001	22.5	77.5
2002	24.3	75.7
2003	26.1	73.9
2004	27.8	72.2
2005	29.4	70.6
2006	31.0	69.0
2007	32.4	67.6

Note: All figures are rounded; the base year is 2000. Source: Frost & Sullivan

Strategic Conclusions

Frost & Sullivan has developed the following strategic conclusions:

- One source single number national directory assistance products ("00" INFO, 10-10-ATT-00 and 10-10-9000) offer users the best customer service levels and most comprehensive product features available in the market today. Some of the smaller ILECs and CLECs must begin to develop similar products to offer their subscribers instead of forcing higher priced 1+NPA-555-1212 service on them. ILECs that offer the 1+411 single number product have an advantage over the smaller ILECs and CLECs that do not offer 1+411 service, but are still slightly inferior to the one source NDA products because they cannot provide call completion on every national search.

- All directory assistance service providers should investigate the possibility of offering voice portal services to their subscribers. Voice portals allow providers the opportunity to provide basic and enhanced directory assistance products to subscribers with minimal investment costs from the provider.

- Call Completion is an excellent method of increasing revenues, but is most effective when its cost is included in the initial directory assistance service. Making it an additional service, regardless of price, reduces the likelihood of its acceptance by users. RBOCs that are allowed to provide interLATA service can greatly increase their directory assistance revenues by offering call completion as part of their single number directory assistance service.

- Free local call allowances decrease revenues among local directory assistance providers. Providers should continue their efforts to reduce the number of call allowances they provide to subscribers.

- Any attempt to charge higher prices to commercial users will decrease commercial revenues for wireline directory assistance. Commercial users are charged more for voice service and data access than their consumer counterparts, but directory assistance is not a service that can be successful using the same pricing structure. The advent of Internet directories provides commercial enterprises with a somewhat reliable and free alternative. The accuracy rate of Internet directories will improve over the forecast period.

- Enhanced services that are available to wireless end users of directory assistance can increase usage and revenues for wireline directory assistance. Services such as offering stock quotes, weather and traffic updates, restaurant and entertainment locators, and yellow page searches are low cost services that end users will pay premium prices to enjoy. Many times these enhanced services do not cost the provider much to provision, but can generate high revenues from heavy usage.

Introduction

INTRODUCTION TO THE WIRELINE DIRECTORY ASSISTANCE SERVICE MARKET

The U.S. retail wireline directory assistance (DA) services market generated $3.38 billion in revenues in 2000. While this is an increase from the previous year, wireline revenues for DA are not expected to increase throughout the forecast period (2000-2007). Wireline DA providers are faced with strong and increasing competition from wireless and Internet providers of DA. Wireless services and calling plan fees are rapidly declining. More subscribers are beginning to use their wireless phones as their primary telecommunication method and abandoning consumer wireline service. Additionally, most often wireless directory assistance searches and call completion service are either free or offered at much lower rates than wireline services. Internet sites that offer directory assistance are also becoming more of a threat to wireline directory assistance providers, especially to their commercial revenues. As more homes and businesses purchase high-speed data access, wireline providers will lose the time savings and convenience advantage they have over the Internet. Another directory assistance service that is stealing revenues from wireline providers is the standard telephone book. The "Phone Book" is now being produced to cater to niche groups, in addition to the general public. There are print directories that exclusively list ethnic businesses, women's only businesses, and other specific categories. Additionally print directories are typically free to consumers.

For the next few years, wireline providers will continue to experience an increase to their demand for minutes and revenues. This can be attributed to the following factors:

- Convenience of wireline service
- The development and marketing of new products by the service providers is helping expand DA usage among commercial and consumer customers.
- Overwhelming number of households and businesses whose primary telecommunication method is wireline service.
- Users' uncertainty of whether or not the call is free.
- Listings are updated are on updated on a daily basis, as opposed to the annual updates of print directories.

For the purpose of this deliverable, the U.S. wireline directory assistance market is divided into the following segments:

- Local Directory Assistance Services
- National/Long Distance Directory Assistance Services

Along with revenues received for providing listings, carriers also receive services for connecting the two parties. The historical data and forecasts include call completion revenues, as carriers do not adhere to a uniform method of reporting these revenues, and often include them in their DA search revenues. This is especially true for national/long distance directory assistance services (NDA).

The key challenges faced by the wireline directory assistance industry include:

- The abundant use of wireless communication is limiting the growth of wireline directory assistance revenues.
- The increasing use of Internet directories, especially by commercial subscribers, to access listings is suppressing revenue growth for wireline providers.
- Providers must meet the subscribers' demand for accuracy by constantly updating and correcting listings.
- Rising operator costs are forcing providers to increase prices for service, which has detrimental affect on usage.
- Implementing and sustaining a long-term, successful customer service initiative.

Definitions

Wireline directory assistance consists of both local and national or long distance services. Wireline refers to the copper wires used to connect subscribers to the person or enterprise that they are calling. Revenues from wireless, Internet, and print directories are not included in the text of this deliverable or in the revenue forecasts.

Revenues in the wireline local directory assistance market include all monies received by the service providers from the provision and usage of local directory assistance services by commercial and consumer customers. Additionally, revenues from call completion services are also included in the market forecasts. Wireline refers to the copper wires used to connect subscribers to the person or enterprise that they are calling. Revenues from wireless, Internet, print directories, and wholesale services are not included in this deliverable. National directory assistance revenues, either generated by ILECs with their NDA products or by single number NDA products that were used for local searches, are not included in the revenue forecasts.

Independent agencies are categorized as companies that provide directory information to directory assistance providers. They do not include wholesale companies that provide directory assistance service for a carrier's subscribers. Independent agencies only provide information for the carrier's directory database.

The volume forecasts for local and national directory assistance markets are based on the annual number of queries for these services by the commercial and consumer customers. The volume forecasts include both free directory assistance calls (monthly call allowances) and paid directory requests. Payphone and international directory assistance volumes are not included in the forecasts.

The term one source single number directory assistance (NDA) product is a description for products that meet the following four characteristics. First, they are available to any potential end user. 10-10-9000 and 10-10-ATT-00 are two examples of products that can be used by subscribers and non subscribers of a carrier. The second characteristic is that single number NDA can be used for national and local listings. Third, the product must include a call completion feature. The fourth characteristic is a seamless listing search. One single point of contact should be able to complete the search for the end user. The end user should not have to dial another number to complete the search. CLECs cannot offer seamless searches, and ILECs cannot offer their products to all potential users, even within their calling regions. As such, they are not defined as "one source" single NDA products in this deliverable.

Market Segmentation

The market for wireline directory assistance is separated into two not so distinct segments. Historically the national directory assistance market had been wholly separate from the local services directory. Interexchange carriers controlled the national directory assistance market and ILECs, particularly RBOCs, were primarily responsible for providing local directory assistance. NDA revenues are expected to increase in proportion to local directory assistance revenues. Local directory assistance will maintain its majority share of revenues, but will be reduced from holding a commanding 63 percent of the market in 2000, to a more distributed level of 53 percent by 2000. With the advent of 1+411 capability, ILECs can now offer national directory assistance. IXC's, to counter this, created one source single number directory assistance products that can be used by any wireline user for both national and local listings and include call completion for all calls. This should increase NDA revenues because ILEC subscribers now have an easier way to access national listings (1+411) and single number directory assistance products will increase overall demand for both local and national searches.

The result is a blurring of revenue shares in both market segments. RBOC's particularly those with interLATA capability are eating away at the IXCs' dominant market share, and IXCs, using true single number products, are beginning to become a minor factor in the local directory assistance market. As would be expected from the revenue shares described above, the proportion of each type of provider's call volume is also changing. In 2007, call volume for national searches will equate to approximately 32.4 percent of overall call volume. This an increase of nearly 400 million minutes over its initial minutes in 2000.

Market Drivers

Figure 3 presents the key market drivers for the U.S. retail wireline directory services market. Market drivers are internal and external industry factors that increase either demand for the product, the price per unit, or the overall revenues for the product.

FIGURE 3

Wireline Directory Assistance Services Market: Market Drivers (U.S.), 2001-2007

Rank	Driver	1-2 Years	3-4 Years	5-7 Years
1	Accurate and Timely Delivery of Listings Increases Demand for Service	High	High	High
2	Deployment and Acceptance of National Directory Assistance from Wireline Providers Increase Revenues	High	High	High
3	Marketing Efforts and Advertising Campaigns Increase Market Awareness and Demand for Service	High	Medium	Medium
4	Revenues Generated from Call Completion Services Increase Overall Market Revenues	Medium	High	High
5	An Increase in Relocating Families and Creation of New Area Codes to Accommodate Population Shifts Promotes the Use of Directory Assistance Services	Medium	Medium	Medium
6	Increasing Information Needs from Commercial Enterprises Will Grow the Demand for Services	Medium	Medium	Medium
7	Decreasing National Directory Assistance Prices Increases Usage	Medium	Low	Low
8	Availability of Multilingual Operators Expands Acceptance and Demand for Service	Low	Low	Medium
9	Low Number of Call Allowances Increases Revenues	Low	Low	Low
10	Provision of Enhanced Services Increases the Demand for Directory Assistance	Low	Low	Low

Source: Frost & Sullivan

Accurate and Timely Delivery of Listings Increases Demand for Service

Wireline providers of directory assistance services typically provide listings much faster and with more certainty than their Internet or print counterparts. Wireline users need only pick up their phone and dial 411 or some other single number product to access significantly more accurate and relevant listings than those that can be found in print or on the Internet. Print directories are updated annually and there is no standard for when Internet directories are updated. Also Internet directories do not adhere to the same accuracy and verification standards as wireline directories.

Wireline directory assistance generally involve human interaction. This interaction creates an opportunity for the user to clarify their search with questions. The operator may be able to assist in the search with his/her own industry knowledge. This increases the accuracy of the results and is not available with print or Internet directory searches.

Deployment and Acceptance of National Directory Assistance from Wireline Providers Increase Revenues

The increasing number of Internet and specialty directories has forced wireline directory assistance providers to develop new products. Currently, customers are migrating from 1+NPA-555-1212 to single number national directory assistance. NDA single number products are increasingly gaining popularity among end users due to the ability of callers obtaining nationwide listings with a minimal amount of information about the person or company they are trying to contact. Also the increase in the creation of new area codes makes directory assistance more attractive, and single number products especially so, since the numbers are typically easy to remember and do not require that customers know the area codes.

Marketing Efforts and Advertising Campaigns Increase Market Awareness and Demand for Service

Many potential users are not aware of the directory assistance services offered by their carriers. Some do not know how many free calls they receive, if they apply to national and local calls, or how many listings they can receive per call. More importantly, some customers do not know how much each call will cost them or whether or not their provider charges for call completion. A large number of end users still believe that 411 is for local calls and that 1+NPA-555-1212 is for national listings.

Marketing efforts by AT&T, WorldCom, and ILECs are beginning to change customers' apathy towards the product. They are beginning to realize that they can save money and increase their likelihood of receiving accurate listings by using one source single number products and using their local provider to find national listings.

Revenues Generated from Call Completion Services Increase Overall Market Revenues

Call completion is the service offered by most wireline directory assistance providers that connects the customer to the listing that he/she sought. Some carriers offer the service free of charge to subscribers, but others such as SBC charge a connection fee for placing the call through for the customer. Call completion is an enhanced service, that if marketed appropriately, could add a substantial amount of revenue to the directory assistance market. Since many carriers offer this service for free, the most successful method of selling this service will be through excellent customer service and good interaction between the caller and operator.

An Increase in Relocating Families and Creation of New Area Codes to Accommodate Population Shifts Promotes the Use of Directory Assistance Services

Families are moving to new homes as part of a company relocation or simply to accommodate for their growing families. Rapid expansion of cities and smaller communities is forcing telecom carriers to create new area codes or expand the reach of existing ones, which means that the number shown in the print directory is probably not as up to date as the ILECs' database of listings. One of the first things that new households do is set up their local phone service. If they do business with an ILEC, their information is automatically updated in its listings database. The print directory will not display any changes until the directory's next issue.

Increasing Information Needs from Commercial Enterprises Will Grow the Demand for Services

With the growth in business activity and the rise in consumer mobility, the information needs of people have grown significantly. The growing trend, by businesses and citizens, of changing their telephone numbers and addresses has led to an increase in usage of directory assistance services by commercial users. Additionally, the emergence changing and newly created area codes contributes to the use of directory assistance services.

The growth in competition has led to an increase in the number of service providers, not all of whom publish directories of their subscribers. When a competitive local exchange carrier (CLEC) acquires an ILEC subscriber, that subscriber will more than likely be omitted from the ILEC's print directory. In order for customers to locate these directory listings, they generally have to rely on telephone directory assistance to obtain that information. Therefore, the growing needs of customers for updated directory information are driving revenue growth for the wireline service providers.

Decreasing National Directory Assistance Prices Increases Usage

As with most products and services, the lower they cost, the more likely they are to be purchased. Prices for national listings are decreasing primarily through competition, but also by carriers beginning to offer service through specially designed products (AT&T "00" INFO) rather than through basic 1+NPA-555-1212 service. One source products such as AT&T's and WorldCom's offerings are less expensive than NPA numbers. RBOCs are also offering national listings through their 1+411 service. IXCs, in order to maintain their usage base, must lower their prices to fight off the penetrating efforts of RBOCs.

Availability of Multilingual Operators Expands Acceptance and Demand for Service

The U.S. is a culturally diverse nation. With cultural diversity, a multitude of different languages will exist. Spanish, Chinese, Korean, and Japanese are the most popular foreign languages in the U.S. It makes sense that these people may not know where local businesses are in their community or the area codes of friends and family scattered throughout the nation. They may also have difficulty in reading directories printed in English. Their best outlet for directory assistance is wireline service. Carriers have responded locally, with Asian language operators on the West coast and Spanish language operators in heavily populated Hispanic areas. On the national level, customers can also be forwarded to an operator that speaks their language.

The provision of multilingual operators will help providers increase their calling volume and revenues.

Low Number of Call Allowances Increases Revenues

Call allowances aid in promoting directory assistance service and increasing the number of people to accept it as a normal, everyday service. By spreading the cost of one charged call over the total number of calls, the price per call decreases. Carriers have done an excellent job of relaying this to their subscribers. After the customers' free calls are exhausted, customers will still view the service as valuable and will be more apt to use the service due to its convenience and reliability compared to print directories.

By reducing the number of free listings available to customers, carriers will realize revenues that much sooner. Directory assistance providers do not realize as much revenue in some states with a high number of free calls as they do in other states where there are little or no free calls.

Provision of Enhanced Services Increases the Demand for Directory Assistance

Enhanced directory assistance services have grown from simple call completion to encompass items such as weather and traffic reports, reverse lookups, stock quotes, sports news, movie listings, categorical searches, and other similar services. With wireline revenues and growth, in general, beginning to stall, carriers have to look at other methods of revenue generation. Enhanced services have heavily influenced the growth and popularity of wireless communication. Wireline providers believe that these same types of services will help improve wireline revenues as well.

Market Restraints

Figure 4 presents the key market restraints for the U.S. retail wireline directory services market. Market restraints are internal and external industry factors that can negatively influence demand for the product, the price per unit, or the overall revenues for the product.

FIGURE 4

Wireline Directory Assistance Services Market: Market Restraints (U.S.), 2001-2007

Rank	Restraint	1-2 Years	3-4 Years	5-7 Years
1	Growing use of Wireless Service Reduces Overall Demand for Wireline Services Including Directory Assistance	High	High	High
2	Institutional Status of Print Directories Hinders Demand for Wireline Directory Assistance	High	High	High
3	Rising Number of Inaccurate Listings Reduces Consumer Confidence in Service	High	Medium	Medium
4	Increasing Popularity and Accessibility of Internet Directories Limits Revenue Growth of Wireline Service	Medium	High	High
5	Free Search Capability from Competitors Limits Attractiveness of Wireline Service	Medium	Medium	High
6	With the Exception of AT&T and WorldCom, DA Providers do Not Heavily Advertise Their Product	Medium	Medium	High
7	High Turnover Rate of Directory Assistance Operators Equates into Poor Customer Service and Lower Net Income from Service	Medium	Low	Low
8	Subscriber Migration from ILEC to CLEC Creates a Lapse in Accurate Listings for Switching Customers	Medium	Low	Low
9	End Users' Reluctance to Use Call Completion Service Limits Revenue Growth	Low	Medium	Medium
10	Private Citizens' Concerns with Privacy and Safety are Beginning to Reduce the Number of Updated Home Listings, Hindering Directories from Providing their Most Basic Service	Low	Low	Low

Source: Frost & Sullivan

Growing use of Wireless Service Reduces Overall Demand for Wireline Services Including Directory Assistance

The declining wireless prices and their increasing subscriber base is suppressing the growth of wireline voice services, including directory assistance. The rise in consumer mobility coupled with the need for constant communications is leading to a greater demand for wireless service. Add to this the future improvements and enhancements promised by Third Generation technology, and wireline communication is in serious trouble of losing some of its subscriber base. Wireless growth rates are constantly in double digits year after year. Wireline growth, while still positive, is decreasing. This is the best and most concrete proof that the trend towards less wireline service is growing.

Institutional Status of Print Directories Hinders Demand for Wireline Directory Assistance

The old "Yellow Pages" is still the most popular method of searching for business listings. The listings are updated every year by the ILEC, and the listings are free. Additionally, the commercial listings typically provide everything that consumers would call a business to ask. The listings are generally accompanied by advertisements showing the hours of operations, the services/products available, an address, and directions on how to get there. Print directories also provide coupons or specials from some of the companies listed in the directory.

Wireline directories, by contrast, are not free. They do not provide directions or hours of operations. These directories are only the first step in finding the information that consumers want. After receiving the listing, the customer must still call the business. Print directories can condense their users' needs to only one step.

Rising Number of Inaccurate Listings Reduces Consumer Confidence in Service

Directory assistance services are only as good as the listings they offer. There is no value in providing incorrect listings to customers. They lose confidence in their wireline provider and may choose to use an alternative method of directory assistance. Inaccurate listings are a fact of life and will occur in all of the different types of directory assistance service. The factor that makes wrong numbers worse for wireline providers is that customers are charged for the service. They speak with someone, and still get the wrong information. This is very frustrating to the customer and poor customer service by the provider.

To combat this, providers update their databases as often as possible; but still occasionally provide an incorrect listing. Like any other service, directory assistance lives in the public eye. Bad service to one customer may cause that customer to tell as many friends as possible about their negative experience; and those people will be less likely to use a wireline directory in the future.

Increasing Popularity and Accessibility of Internet Directories Limits Revenue Growth of Wireline Service

Internet use is growing at a rapid pace. Nearly 41 percent of all of the U.S. homes that have computers have Internet access. In the past, and to a great extent today, Internet and wireline communication battled for the same phone line. A person needed to be disconnected from the Internet in order to receive a telephone call, and vice versa. With the advent of DSL and cable modem data access, and an increase in additional phone lines per household, customers can now have phone service and Internet access at the same time. Commercial enterprises have also made the jump to "always on" broadband access. This ability of customers to be "always on" to the Internet reduces one of the advantages that wireline directories had over Internet directories.

In addition to the relevant ease of Internet access, print directories are largely free to users. No matter how many searches one customer performs each month, there are no charges. There is also no limit to how many searches a user can make per connection. Wireline providers limit searches to two or three per call.

Free Search Capability from Competitors Limits Attractiveness of Wireline Service

ILECs offer most of the customers in their region a limited number of free searches. Some subscribers in certain states, however, are not afforded any free calls. In contrast, all of the searches conducted in a generic print directory are free. Even some of the niche print directories are given to consumers free of charge. Also, some of the searches completed by commercial users on Internet directories are free. Almost all consumer searches on the Internet are free. Both of these directories do not just stop at phone numbers and addresses. They also provide hours of operations, a summary of the business, and directions to the businesses. All of these extra services are free.

With the Exception of AT&T and WorldCom, DA Providers do Not Heavily Advertise Their Product

10-10-9000 and AT&T 00 INFO are the only single number products that receive significant and continuos national exposure in print, radio, or television. The remaining carriers do not heavily advertise their 1+NPA-555-1212 or 411 products. This may be because those numbers are viewed as universal among carriers and do not have the excitement of single number products such as AT&T's or WorldCom's products. Perhaps the other carriers do not view their directory assistance service as having the revenue potential necessary to commit to a significant marketing campaign. Some directory assistance providers stated that they are concentrating on other aspects of their business to increase their revenues. They are placing more emphasis on data access and wireless service than on directory assistance service. Either way, carriers must begin to look at directory assistance as a serious revenue generator. There are many drivers existing today that will make directories more profitable in the future. The lack of marketing on part of the service providers has led to a lower overall awareness level of a majority of NDA services. This has translated into limited usage of these services.

High Turnover Rate of Directory Assistance Operators Equates into Poor Customer Service and Lower Net Income from Service

High turnover continues to be a serious issue for directory assistance call centers. In past years this problem has intensified as the unemployment rate has dropped to historic lows in the United States. As a result, many call centers spent a great deal of time and money on training operators that were not committed to their jobs. Recently, the unemployment rate has risen, and there is less turnover than before; but the threat remains. The position of directory assistance operator is typically an entry level position. Operators with strong work ethics which have shown the ability to handle other responsibilities are generally promoted to higher paying jobs outside of directory assistance. Operators who do not show any promise usually leave the provider within two years for better opportunities. Either way, carriers have to continually expend capital on recruitment and training.

When there is a lack of capable operators, customer service suffers. The end user may be parked in the telephone queue for a disproportionate amount of time because the operators are taking too long to handle simple requests; or the directory assistance provider may be working at less than full operator capacity while it searches for more operators.

Subscriber Migration from ILEC to CLEC Creates a Lapse in Accurate Listings for Switching Customers

Another factor that is likely to affect the availability of and provision of accurate listings is the increase in competition in the local market. For instance, a number of CLECs in addition to their end users have raised concerns with the FCC about the fact that once a customer switches over from an ILEC, they are typically dropped from print and telephone directory services. It is due to this reason that the callers are unable to obtain a particular individual or business listing which increases their dissatisfaction with overall directory assistance.

From the CLEC viewpoint, since they do not normally have in-house directory assistance functions they are solely dependent on the ILECs or the independent third party providers for the provision of directory assistance services. Any lapse in quality of service by these companies, therefore, has a direct impact on a CLEC's ability to cultivate an increase in service usage. Conversely, the ILECs believe that the rising operational costs prevent them from keeping track of all external changes in the databases.

End Users' Reluctance to Use Call Completion Service Limits Revenue Growth

The majority of end users that use call completion services either receive the service for free or at greatly reduced rates. These people most often are visually impaired, or have limited use of their digits. Other end users that use call completion services are not regular users of the service. They may agree to use the service if it is free, if they cannot write down the information, or if they do not want to be bothered with remembering the number. Providers have attempted to use call completion services to raise their revenues by charging a minimal amount for the service. Some carriers offer the service for as little as five cents per completion. These low prices, coupled with its low usage, are not enough to generate substantial revenue growth.

Private Citizens' Concerns with Privacy and Safety are Beginning to Reduce the Number of Updated Home Listings, Hindering Directories from Providing their Most Basic Service

No commercial enterprise would object to being listed in a directory. Private citizens think otherwise. They may not want to be bothered at home. Their belief is that if they want to speak with someone at home, they will make the phone call, or they will control who has access to their phone number. These consumers are concerned with privacy and security. Having their names and phone numbers listed in a public directory does not coincide with their expectations of privacy. They cannot determine the benefit in allowing complete strangers to have access to their name, address, and telephone number. As more people begin to feel this way, there will be fewer accurate listings in directories nationwide. This will have an impact on directory usage, as providers will only be able to provide their users with fewer and fewer accurate listings. Additionally, if the provider cannot locate a listing, they cannot charge for their service, further reducing their revenues.

Challenges

The first phase of Frost Sullivan's research system is to identify the key challenges facing the industry. These challenges have an impact on and are integrated into every phase of the research. An industry challenge is any issue that can affect the development of the market or the competitors in the marketplace. Challenges include customer issues, regulatory programs, economic trends, market measurement trends, competitive strategies, new technologies, sales and marketing strategies, new market opportunities, and market threats.

Figure 5 lists the most challenging issues facing the U.S. wireline directory assistance market. These challenges have been identified based on the research done for this report. In the analysis of challenges to the industry, the time frame is very important. It allows market participants to prepare strategies to overcome the challenges and insulate themselves from any future negative trends.

This section provides a time frame and assesses when each of the challenges is likely to have the greatest impact on the market over the forecast period.

FIGURE 5

Wireline Directory Assistance Services Market: Industry Challenges (U.S.), 2001-2007

Challenge	1-2 Years	3-4 Years	5-7 Years
Educating Subscribers of the Benefits of Directory Assistance to Foster Loyalty and Usage	High	High	High
Increasing Popularity of Wireless Telecommunication Suffocates Wireline Directory Assistance Growth	High	High	High
Providers Must Constantly Update their Listings to Remain Current and Valuable to Their Customers	High	High	High
Creating Successful Marketing Campaigns and Products to Increase the Usage of Wireline Directory Assistance Service	Medium	High	High
Implementing and Sustaining a High Customer Service Level with Live Operators to Increase Usage	Medium	Medium	Medium
Overcoming Popularity of the Standard Telephone Book	Medium	Low	Low
Growing Use of Internet Directory Assistance Services Will Begin to Steal Market Revenues from Wireline Providers	Low	High	High
Providing a Smooth Transition from Live Operators to Automated Services Must be Accomplished to Maintain Net Income Growth	Low	Medium	High
Voice Portal Capability on the Internet Threatens Wireline Directory Assistance Convenience and Ease of Use Advantage	Low	Medium	Medium

Source: Frost & Sullivan

EDUCATING SUBSCRIBERS OF THE BENEFITS OF DIRECTORY ASSISTANCE TO FOSTER LOYALTY AND USAGE

Wireline providers must promote and market their directory assistance services much like they do their other products and services. If not, a subscriber may choose to use a competing provider, because they are not aware of their own carrier's service. Providers must also promote the benefits of wireline directory assistance over its print, Internet, and wireless counterparts. Print directories have always been a significant alternative to the wireline market, but wireline grew in usage due to its reliability and accuracy of listings. Wireless and Internet directories are gaining popularity as their technologies continue to gain acceptance from subscribers.

INCREASING POPULARITY OF WIRELESS TELECOMMUNICATION SUFFOCATES WIRELINE DIRECTORY ASSISTANCE GROWTH

The growth in the wireless subscriber base is resulting in a shift in demand from wireline to wireless services. The declining prices for cellular and PCS services are making them accessible to a growing number of commercial and consumer subscribers. Additionally, wireless Internet initiatives are further contributing to the popularity of wireless services. The continued growth of wireless services, which will receive a significant boost from Third Generation technology, will hinder the overall growth of wireline services, including directory assistance.

Providers Must Constantly Update their Listings to Remain Current and Valuable to Their Customers

The provision of accurate information remains a leading challenge for the providers of wireline directory assistance services. Specifically in the NDA markets, where the listings are compiled from a number of services, the accuracy concerns increase greatly since all the various databases are different time intervals. For example, local telephones typically update their listings at the end of every business day, but independent listing agencies may update their listings as sporadically as once a week or once a month.

Another problem faced by providers is that their listing resources may scan information from print directories into their databases. This lowers the validity of the listings, as print directories are updated annually and will not have numbers for new businesses, new houses, or any information on midyear changes.

As a result of inaccurate listings, subscribers may instead begin to use Internet or print directories to find listings. These sources are just as inaccurate or more so than wireline directories, but they are free. Wireline providers have steadily decreased the number of free searches offered to subscribers.

Creating Successful Marketing Campaigns and Products to Increase the Usage of Wireline Directory Assistance Service

Wireline service is the second most convenient way to access a listing; providers must develop ways to increase the overall demand for directory assistance. They can look to position directory assistance as an everyday service for a variety of needs. Providers can also redefine the service to be integrated with regular phone service, rather than an additional premium service. Additionally, implementing separate campaigns focusing on call completion and other enhanced services will increase usage of those ancillary services.

Any promotion that highlights the benefits of wireline over its competition will help to increase acceptance and overall revenues.

Implementing and Sustaining a High Customer Service Level through Training and Monitoring to Increase Product Usage

Besides accurate listings, interaction between operators and customers is the most important factor in building a loyal user base. Rude and curt responses to inquiries will make customers avoid wireline service in favor of Internet or print directories. Exceptional interaction between the operator and customer can break down any apprehension a customer may have in using the service again. Additionally, building comfort between the two can help the provider up sell the customer to a call completion or other enhanced service.

Most carriers have some level of quality assurance initiatives in place to ensure that operators are following proper procedures when assisting an end user. These programs may be time consuming and expensive to sustain, but must be done to guarantee that subscribers are receiving the best possible service.

Overcoming Popularity of the Standard Telephone Book

The "Yellow Pages" are free to use. The listings for businesses that have been in existence for over a year are generally correct. Print directories for businesses also provide more than a phone number. They provide hours of operations, directions, a brief description, and multiple listings of branches that may be more convenient to the customer. Internet directories are similar to print directories, except that their listings are less reliable as more effort must be exerted by the user to access the sites.

Another factor that influences users of directory assistance is customer service. The phone book is never rude, hard to understand, or slow in delivering listings. Customers appreciate its simplicity, especially if they have had a negative experience with a directory assistance operator.

Growing Use of Internet Directory Assistance Services Will Begin to Steal Market Revenues from Wireline Providers

Internet directories are becoming a larger presence on the Internet. Some wireline carriers have even entered the market. AT&T offers AnyWho.Com directory assistance on its web site. With an increase in the purchase of DSL and Cable data access services, residences are "always on." They do not have to dial-up to the Internet and waste time waiting for a connection. This eliminates a huge advantage that wireline providers had over Internet directory assistance. Internet directories, in addition to the phone numbers, also offer a business description and summary of the company. The directory may also offer listings of competing businesses. These services are largely free of charge; an advantage over wireline services.